-- This SQL code calculates the monthly returns for each stock in the "sp500\_prices" dataset.

SELECT t.Company, t.Year, t.Month, CONCAT(ROUND(t.Monthly\_Return \* 100, 2), '%') AS Monthly\_Return\_Percentage

FROM (

  -- This subquery calculates the monthly return for each stock.

  SELECT Company,

         YEAR(CONCAT(Year, '-', Month, '-', Day)) AS Year,

         MONTH(CONCAT(Year, '-', Month, '-', Day)) AS Month,

         ((Close - LAG(Close) OVER (PARTITION BY Company ORDER BY CONCAT(Year, '-', Month, '-', Day))) / LAG(Close) OVER (PARTITION BY Company ORDER BY CONCAT(Year, '-', Month, '-', Day))) AS Monthly\_Return

  FROM sp500\_prices.sp500\_prices) t

WHERE t.Monthly\_Return IS NOT NULL

ORDER BY t.Company, t.Year, t.Month;

This SQL code analyzes the performance of various stocks in the "sp500\_prices" dataset by calculating and displaying their monthly returns.

To achieve this, the code uses a subquery to calculate the monthly return for each stock. This subquery employs the LAG() function to compare the closing price for the current month to the closing price for the previous month. It then computes the percentage change in the stock's closing price from one month to the next and stores these values in a column named "Monthly\_Return."

The outer query selects specific columns from the dataset, including the stock's name, year, month, and monthly return percentage. It filters out rows where the monthly return value is null, converts the decimal value of the monthly return to a percentage format, and rounds it to two decimal places.

This SQL code provides a structured and precise method to present the monthly returns for each stock in the "sp500\_prices" dataset. By presenting this data, investors can discern trends in the stock market and make well-informed investment decisions.